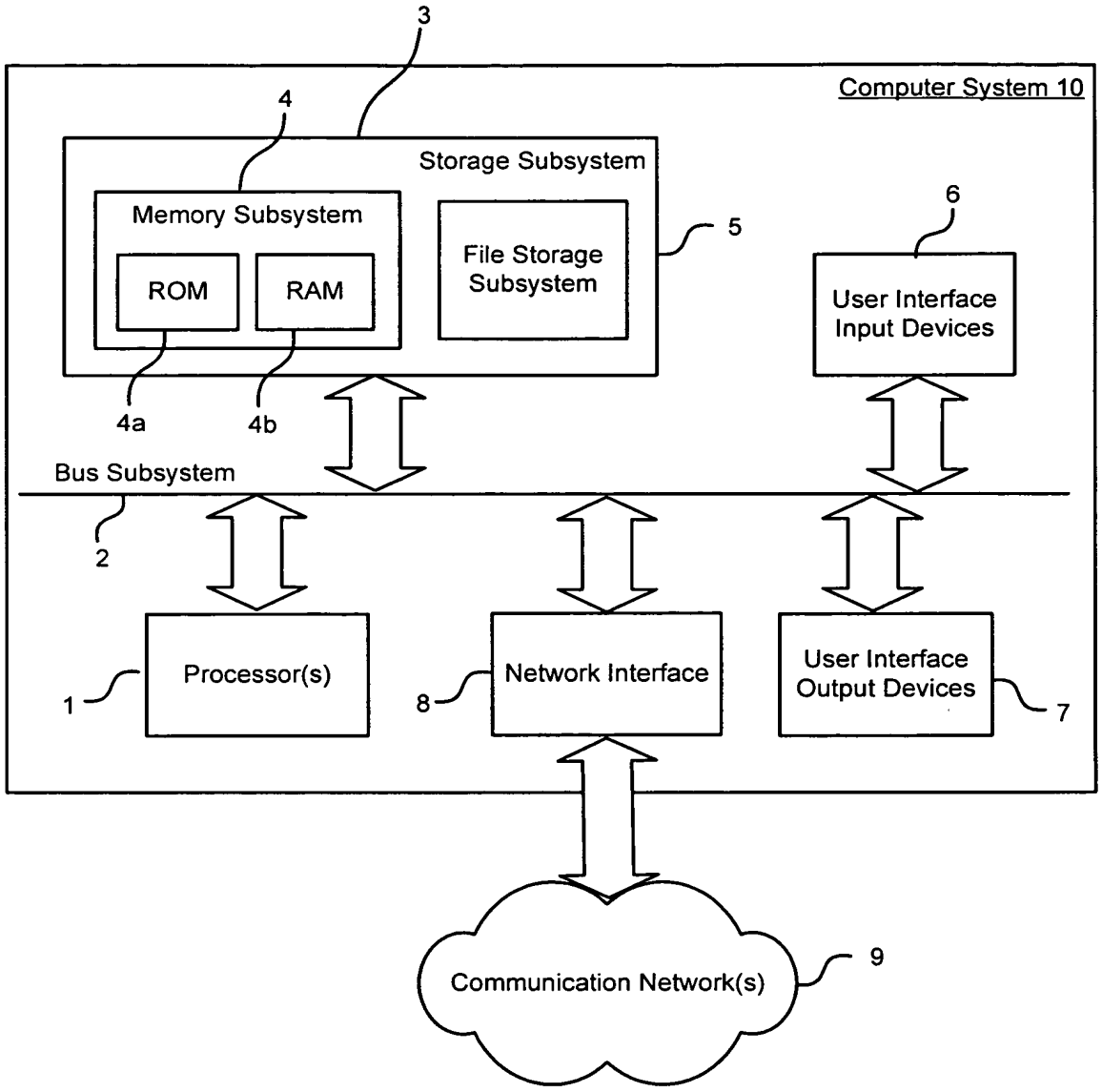

3
Computer System 10
4
Storage Subsystem
Memory Subsystem
ROM
RAM
File Storage Subsystem
5
6
User Interface Input Devices
4a
4b
Bus Subsystem
2
Processor(s)
1
Network Interface
8
User Interface Output Devices
7
Communication Network(s)
9

*Fig. 1A*

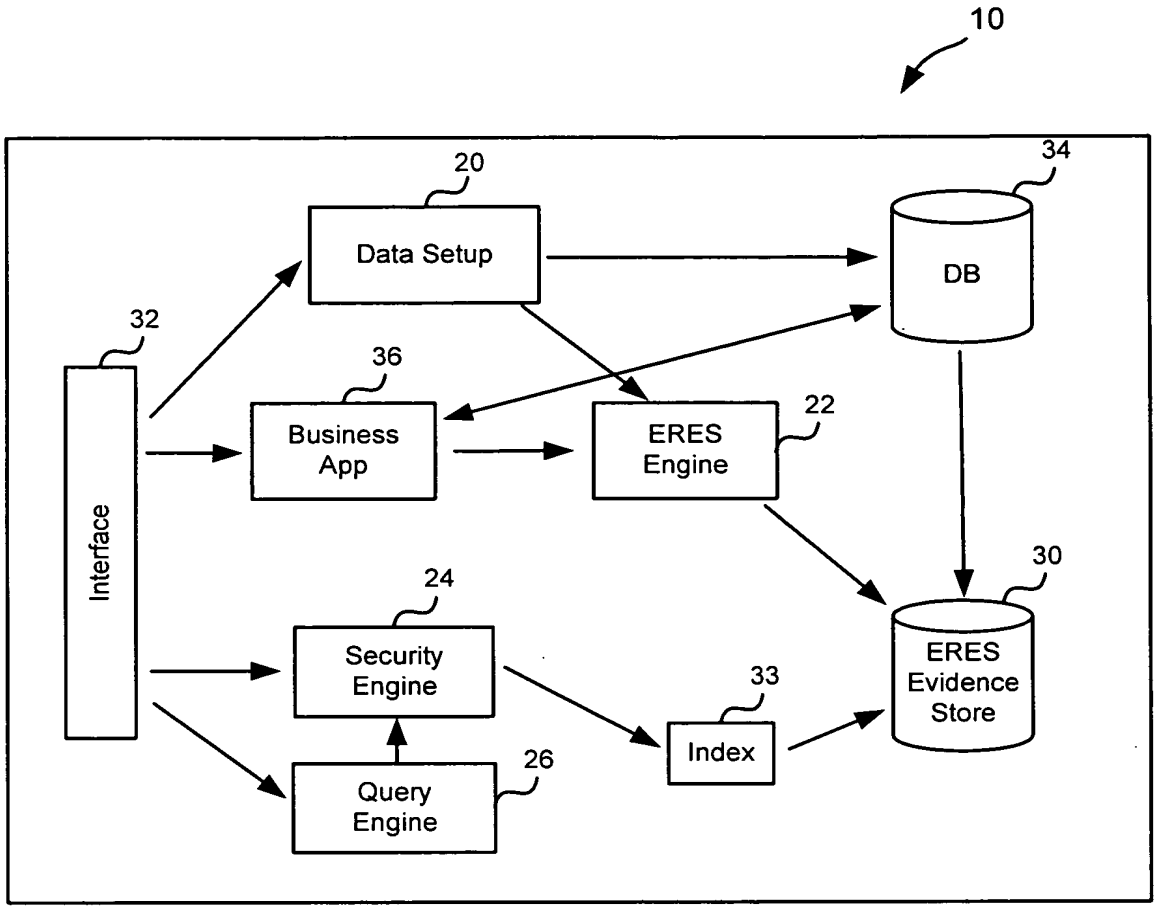

10
20
Data Setup
34
DB
32
Interface
36
Business App
22
ERES Engine
30
24
Security Engine
33
Index
ERES Evidence Store
26
Query Engine

*Fig. 1B*

30a

| Name | Datatype | Length | Mandatory | Comments |
|---|---|---|---|---|
| DOCUMENT_ID | NUMBER | | Yes | Unique document id |
| PSIG_XML | CLOB | (4000) | | XML document |
| PSIG_DOCUMENT | CLOB | (4000) | | Electronic record as seen by user |
| PSIG_DOCUMENTFORMAT | VARCHAR2 | (100) | | Format of the Document |
| PSIG_TIMESTAMP | DATE | | | Timestamp when the document was requested |
| PSIG_TIMEZONE | VARCHAR2 | (240) | | Time Zone the document was initiated |
| DOCUMENT_REQUESTER | VARCHAR2 | (240) | | Document requester |
| PSIG_STATUS | VARCHAR2 | (32) | | Status of the document (ERROR, PENDING, COMPLETE) |
| PSIG_SOURCE | VARCHAR2 | (32) | | Source of the Document |
| EVENT_NAME | VARCHAR2 | (80) | | Event associated to the document |
| EVENT_KEY | VARCHAR2 | (240) | | Event instance identifier |
| PRINT_COUNT | NUMBER | | | Number of time document requested from printing |
| CREATION_DATE | DATE | | | WHO Column |
| CREATED_BY | NUMBER | | | WHO Column |
| LAST_UPDATE_DATE | DATE | | | WHO Column |
| LAST_UPDATED_BY | NUMBER | | | WHO Column |
| LAST_UPDATE_LOGIN | NUMBER | | | WHO Column |

30b

| Name | Datatype | Length | Mandatory | Comments |
|---|---|---|---|---|
| SIGNATURE_ID | NUMBER | | | Signature ID |
| DOCUMENT_ID | NUMBER | | | Document Id Refers EDR_PSIG_DOCUMENTS |
| EVIDENCE_STORE_ID | NUMBER | | | Evidence Store Id if the signature are present in Server Tech Storage |
| USER_NAME | VARCHAR2 | (100) | | User name who signed the Document |
| USER_RESPONSE | VARCHAR2 | (100) | | User Response |
| SIGNATURE_TIMESTAMP | DATE | | | Signed Time and Date |
| SIGNATURE_TIMEZONE | VARCHAR2 | (240) | | Signature Time Zone |
| SIGNATURE_STATUS | VARCHAR2 | (32) | | Signature Status (PENDING, COMPLETE, ERROR) |
| CREATION_DATE | DATE | | | WHO Columns |
| CREATED_BY | NUMBER | | | WHO Column |
| LAST_UPDATE_DATE | DATE | | | WHO Column |
| LAST_UPDATED_BY | NUMBER | | | WHO Column |
| LAST_UPDATE_LOGIN | NUMBER | | | WHO Column |

***Fig. 2***

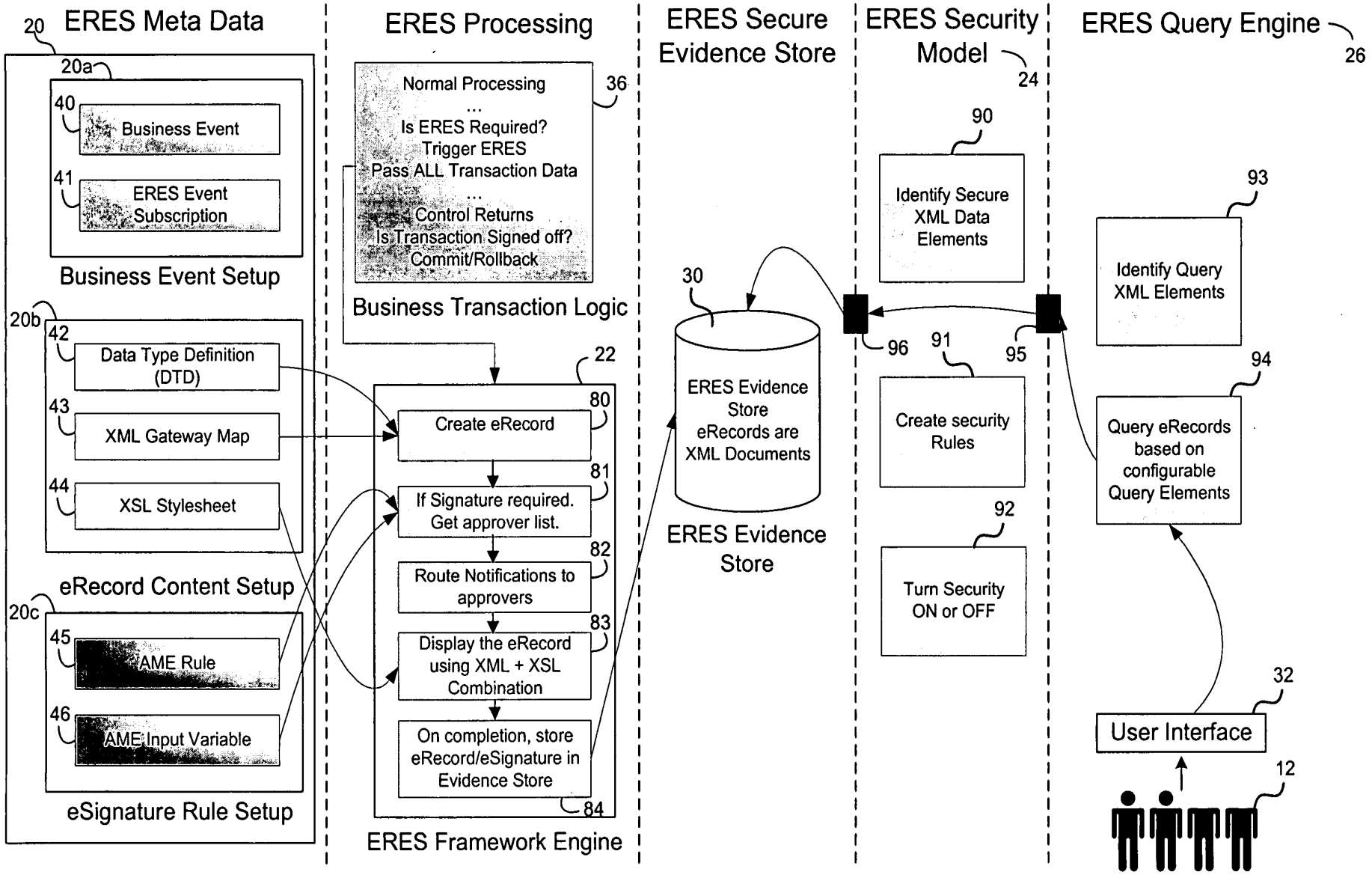

20 ERES Meta Data
20a
40
Business Event
41
ERES Event Subscription
Business Event Setup
20b
42
Data Type Definition (DTD)
43
XML Gateway Map
44
XSL Stylesheet
eRecord Content Setup
20c
45
AME Rule
46
AME Input Variable
eSignature Rule Setup
ERES Processing
Normal Processing
...
Is ERES Required?
Trigger ERES
Pass ALL Transaction Data
...
Control Returns
Is Transaction Signed off?
Commit/Rollback
36
Business Transaction Logic
22
80
Create eRecord
81
If Signature required. Get approver list.
82
Route Notifications to approvers
83
Display the eRecord using XML + XSL Combination
On completion, store eRecord/eSignature in Evidence Store
84
ERES Framework Engine
ERES Secure Evidence Store
30
ERES Evidence Store eRecords are XML Documents
ERES Evidence Store
ERES Security Model
24
90
Identify Secure XML Data Elements
96
91
95
Create security Rules
92
Turn Security ON or OFF
ERES Query Engine
26
93
Identify Query XML Elements
94
Query eRecords based on configurable Query Elements
32
User Interface
12

*Fig. 3*

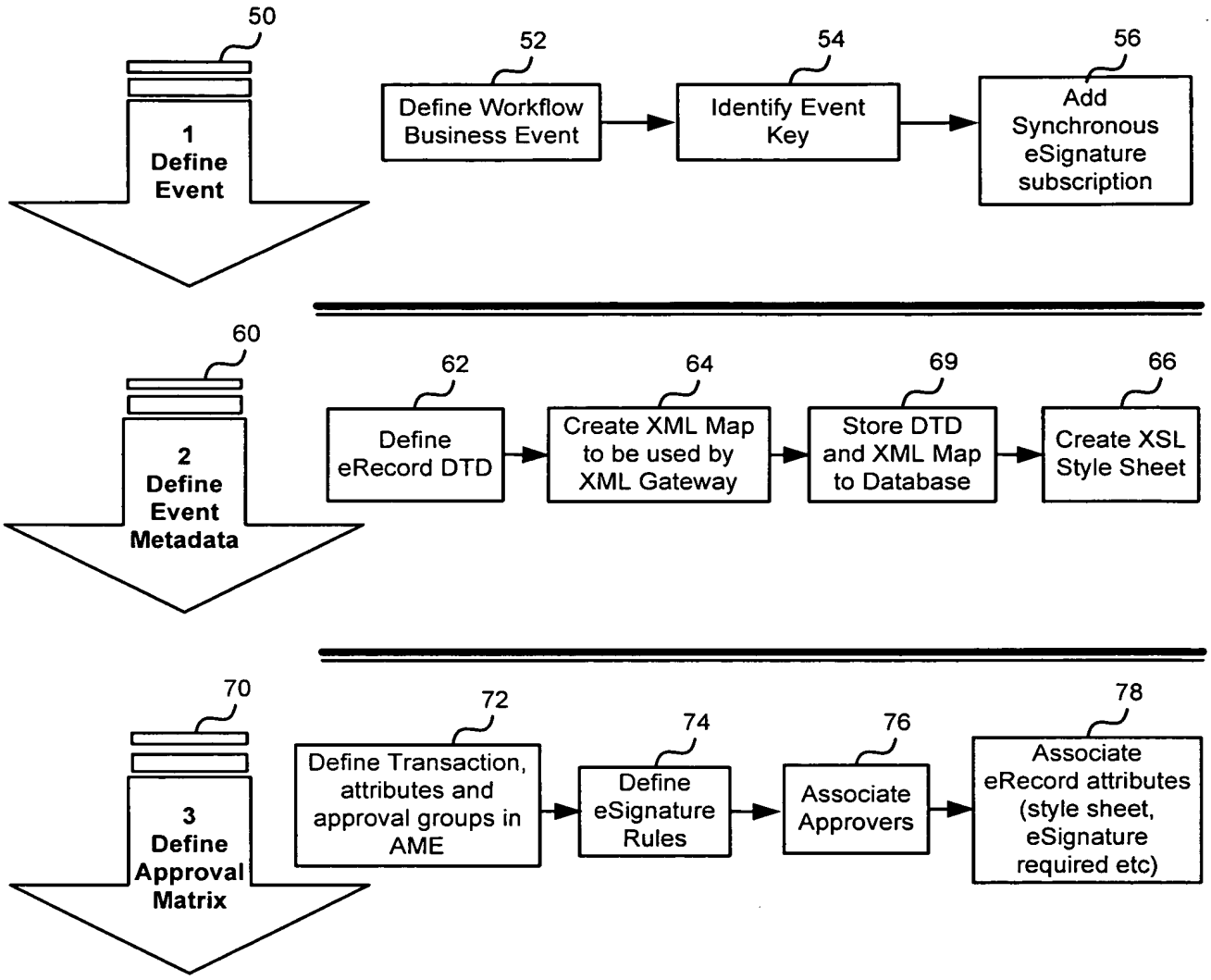

50
1
Define
Event
52
Define Workflow
Business Event
54
Identify Event
Key
56
Add
Synchronous
eSignature
subscription
60
2
Define
Event
Metadata
62
Define
eRecord DTD
64
Create XML Map
to be used by
XML Gateway
69
Store DTD
and XML Map
to Database
66
Create XSL
Style Sheet
70
3
Define
Approval
Matrix
72
Define Transaction,
attributes and
approval groups in
AME
74
Define
eSignature
Rules
76
Associate
Approvers
78
Associate
eRecord attributes
(style sheet,
eSignature
required etc)

*Fig. 4*

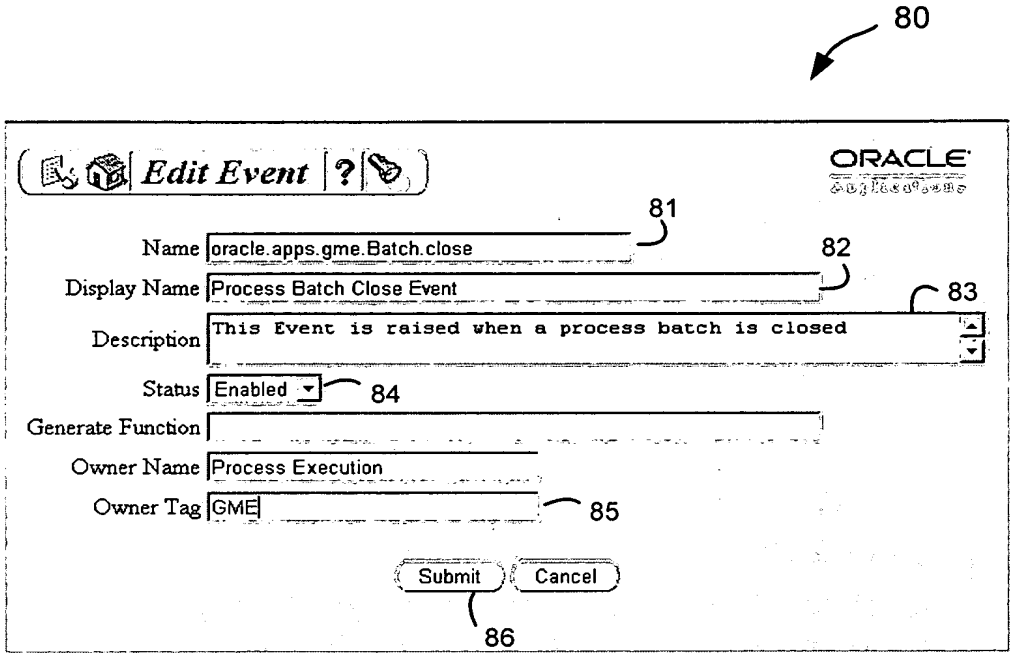



*Fig. 5*

90

| | Rule | Attribute 93 | Approver(s) 94 |
|---|---|---|---|
| 91 | If PLANT = "Plant 1" And PRODUCT = "Cyanide" | eRecord = Yes<br>eSignature = Yes<br>eRecord Style Sheet = StyleSheet12.X51 | James Dunn and Mark Arthur |
| 92 | If PLANT = "Plant 1" | eRecord = Yes<br>eSignature = No<br>eRecord Style Sheet = NULL | David Anderson |

*Fig. 6*

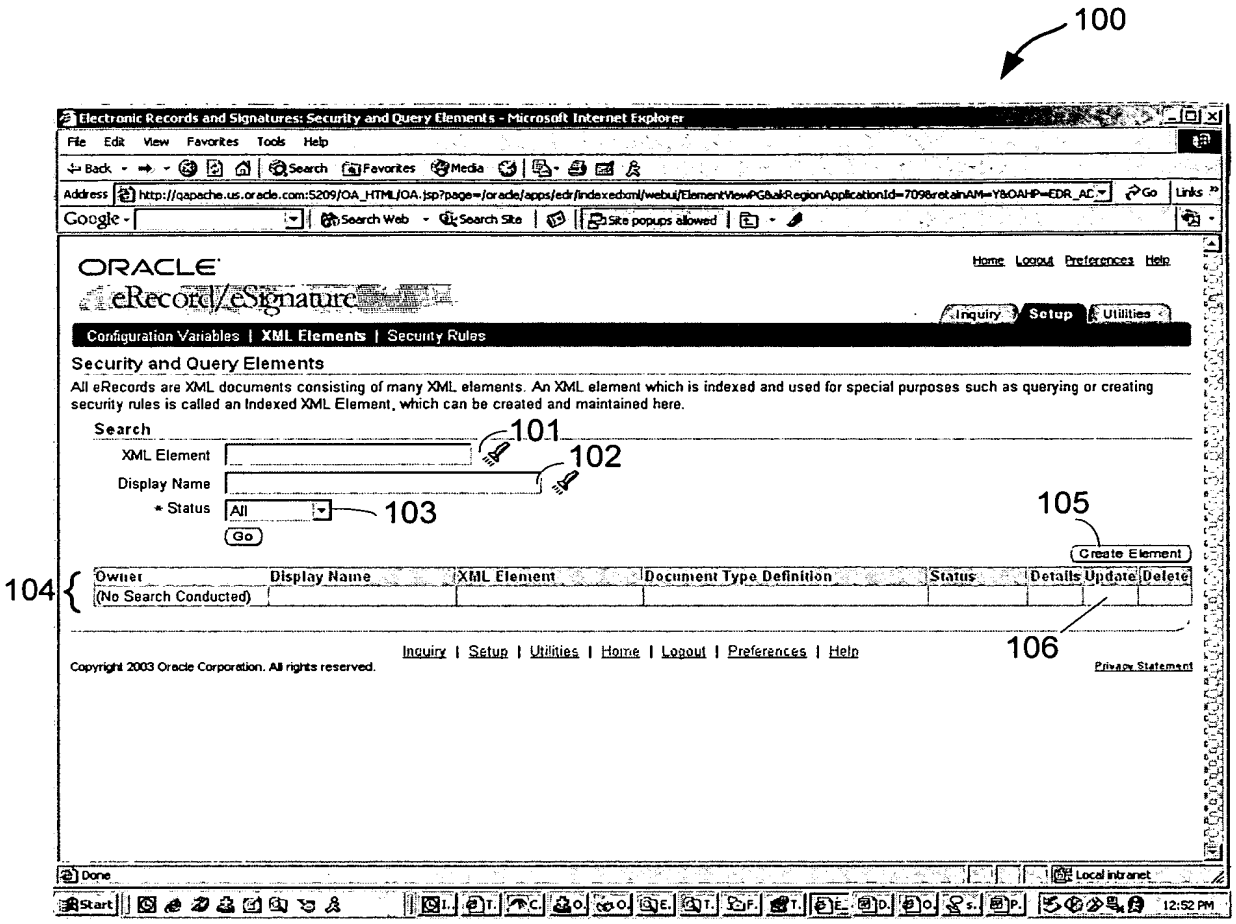

100
Electronic Records and Signatures: Security and Query Elements - Microsoft Internet Explorer
ORACLE
eRecord/eSignature
Home Logout Preferences Help
Inquiry Setup Utilities
Configuration Variables | XML Elements | Security Rules
Security and Query Elements
All eRecords are XML documents consisting of many XML elements. An XML element which is indexed and used for special purposes such as querying or creating security rules is called an Indexed XML Element, which can be created and maintained here.
Search
XML Element
Display Name
* Status
All
Go
101
102
103
105
Create Element
104
Owner
Display Name
XML Element
Document Type Definition
Status
Details
Update
Delete
(No Search Conducted)
106
Inquiry | Setup | Utilities | Home | Logout | Preferences | Help
Copyright 2003 Oracle Corporation. All rights reserved.
Privacy Statement
Done
Local intranet
Start
12:52 PM

*Fig. 7*

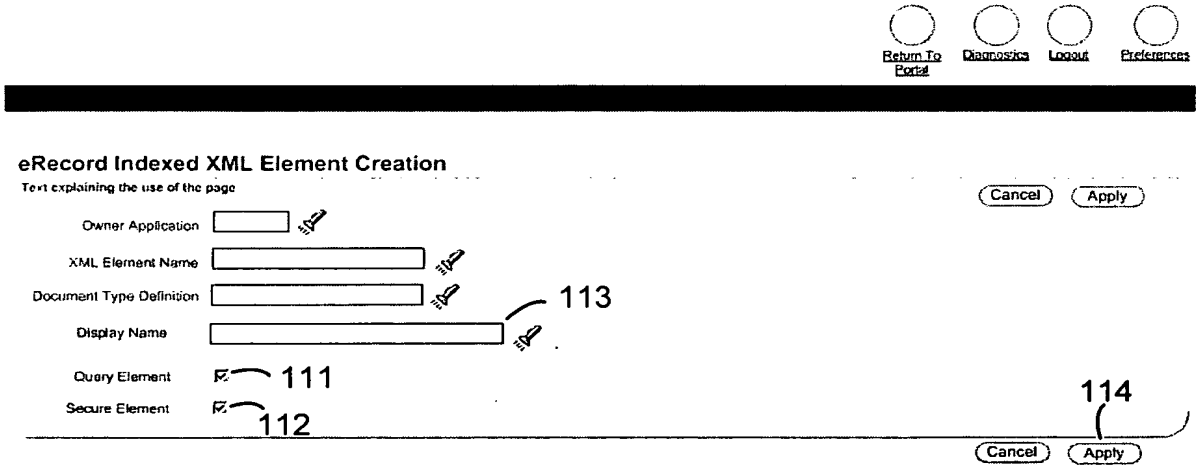

Return To Portal
Diagnostics
Logout
Preferences
eRecord Indexed XML Element Creation
Text explaining the use of the page
Cancel
Apply
Owner Application
XML Element Name
Document Type Definition
Display Name
113
Query Element
111
Secure Element
112
114
Cancel
Apply

*Fig. 8*

33a

| Name | Null? | Type | Description |
|---|---|---|---|
| ELEMENT_ID | NOT NULL | NUMBER | Surrogate Primary Key. |
| XML_ELEMENT | NOT NULL | VARCHAR2(30) | XML element identified as being searchable |
| DTD_ROOT_ELEMENT | | VARCHAR2(30) | Root element of the XML |
| APPLICATION_ID | NOT NULL | NUMBER | Application ID of the application owning the query element. |
| INDEX_SECTION_NAME | NOT NULL | VARCHAR2(30) | Name of the section created in the index for the query element |
| INDEX_TAG | NOT NULL | VARCHAR2(64) | Tag used to create the section in the index. Unique Constraint. |
| STATUS | NOT NULL | CHAR(1) | Status of the query element. It can be I(ndexed) or N(ot Indexed). |
| CREATED_BY | NOT NULL | NUMBER(15) | Standard WHO column |
| CREATION_DATE | NOT NULL | DATE | Standard WHO column |
| LAST_UPDATED_BY | NOT NULL | NUMBER(15) | Standard WHO column |
| LAST_UPDATE_LOGIN | | NUMBER(15) | Standard WHO column |
| LAST_UPDATE_DATE | NOT NULL | DATE | Standard WHO column |

33b

| Name | Null? | Type | Description |
|---|---|---|---|
| ELEMENT_ID | NOT NULL | NUMBER | Partial Primary key. |
| LANGUAGE | NOT NULL | VARCHAR2(4) | Partial Primary key. Language used for translatable columns |
| SOURCE_LANG | | VARCHAR2(4) | Source language |
| DISPLAY_NAME | NOT NULL | VARCHAR2(100) | Display name of the query element. This would be visible to end users. |
| DESCRIPTION | | VARCHAR2(100) | Description of the query element. |
| CREATED_BY | NOT NULL | NUMBER(15) | Standard WHO column |
| CREATION_DATE | NOT NULL | DATE | Standard WHO column |
| LAST_UPDATED_BY | NOT NULL | NUMBER(15) | Standard WHO column |
| LAST_UPDATE_LOGIN | | NUMBER(15) | Standard WHO column |
| LAST_UPDATE_DATE | NOT NULL | DATE | Standard WHO column |

33c

| Name | Null? | Type | Description |
|---|---|---|---|
| USAGE_ID | NOT NULL | NUMBER | Surrogate primary key |
| ELEMENT_ID | NOT NULL | NUMBER | XML element used in creating the security rule. |
| ELEMENT_USAGE | NOT NULL | CHAR(1) | The usage of the XML element. It can be Q(uery) or S(ecure) |
| CREATED_BY | NOT NULL | NUMBER(15) | Standard WHO column |
| CREATION_DATE | NOT NULL | DATE | Standard WHO column |
| LAST_UPDATED_BY | NOT NULL | NUMBER(15) | Standard WHO column |
| LAST_UPDATE_LOGIN | | NUMBER(15) | Standard WHO column |
| LAST_UPDATE_DATE | NOT NULL | DATE | Standard WHO column |

*Fig. 9*

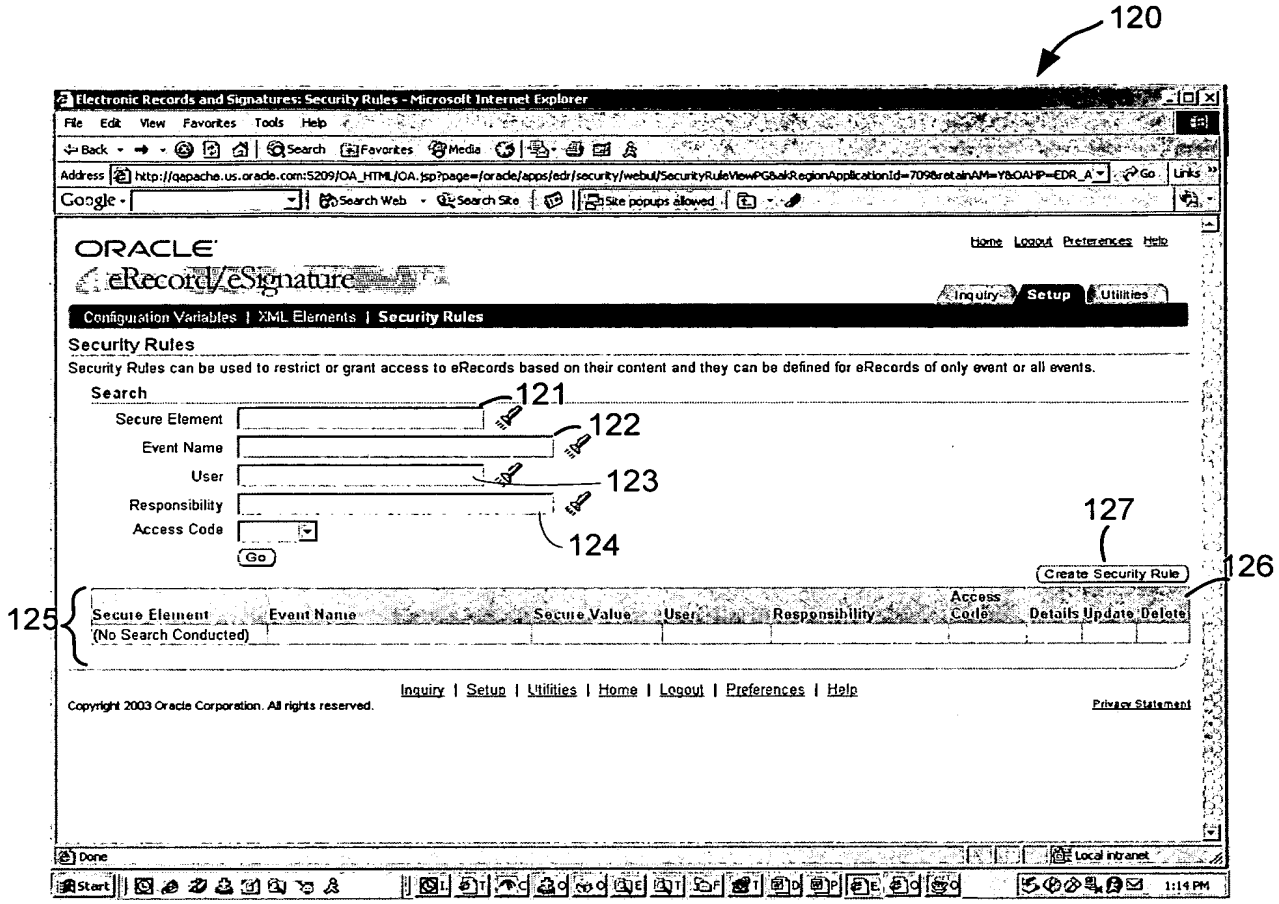



*Fig. 10*

33d

| Name | Null? | Type | Description |
|---|---|---|---|
| RULE_ID | NOT NULL | NUMBER | Surrogate primary key |
| ELEMENT_ID | NOT NULL | NUMBER | XML element used in creating the security rule. |
| EVENT_NAME | | VARCHAR2(240) | Business event name used in creating the security rule. |
| SECURE_VALUE | NOT NULL | VARCHAR2(100) | Value secured by the security rule |
| USER_ID | | NUMBER(15) | User ID of the APPS user for whom security is created |
| RESPONSIBILITY_ID | | NUMBER(15) | Responsibility ID of the APPS responsibility for which security is created |
| ACCESS_CODE | NOT NULL | CHAR(1) | Access code can be G(rant) or R(estrict) |
| START_DATE | NOT NULL | SYSDATE | Start date for the rule |
| END_DATE | | SYSDATE | End date for the rule |
| CREATED_BY | NOT NULL | NUMBER(15) | Standard WHO column |
| CREATION_DATE | NOT NULL | DATE | Standard WHO column |
| LAST_UPDATED_BY | NOT NULL | NUMBER(15) | Standard WHO column |
| LAST_UPDATE_LOGIN | | NUMBER(15) | Standard WHO column |
| LAST_UPDATE_DATE | NOT NULL | DATE | Standard WHO column |

*Fig. 11*

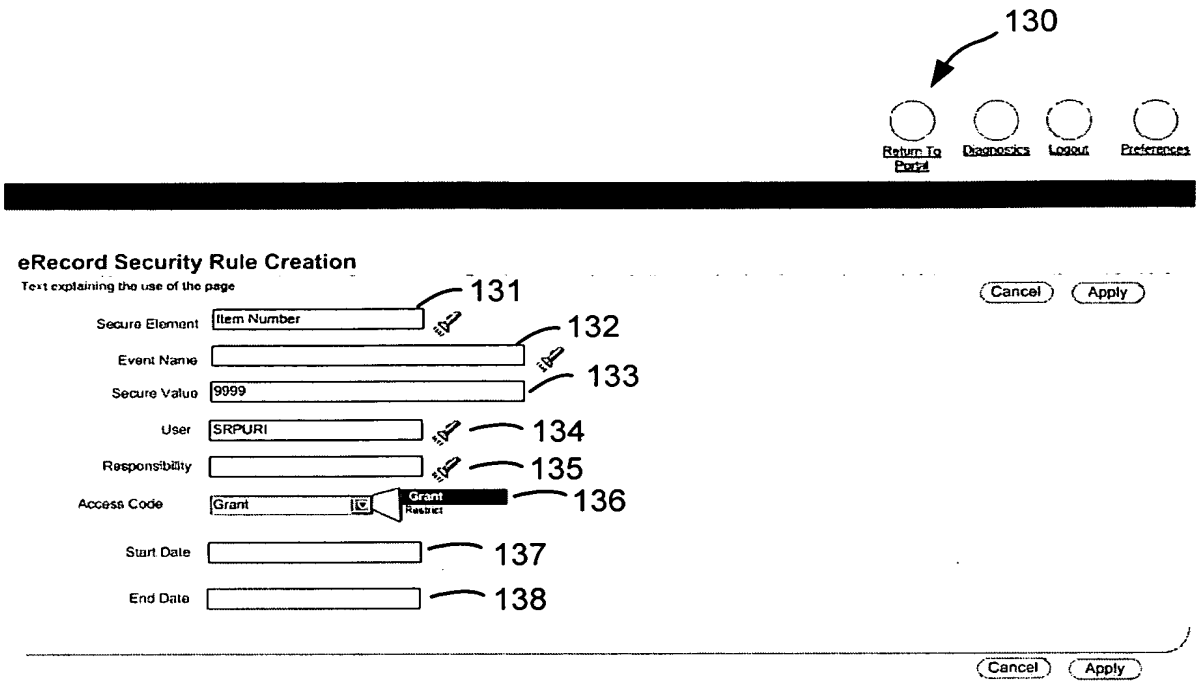

130
Return To Portal
Diagnostics
Logout
Preferences
eRecord Security Rule Creation
Text explaining the use of the page
Cancel
Apply
131
Secure Element
Item Number
132
Event Name
133
Secure Value
9999
User
SRPURI
134
Responsibility
135
Access Code
Grant
Restrict
136
Start Date
137
End Date
138
Cancel
Apply

*Fig. 12*

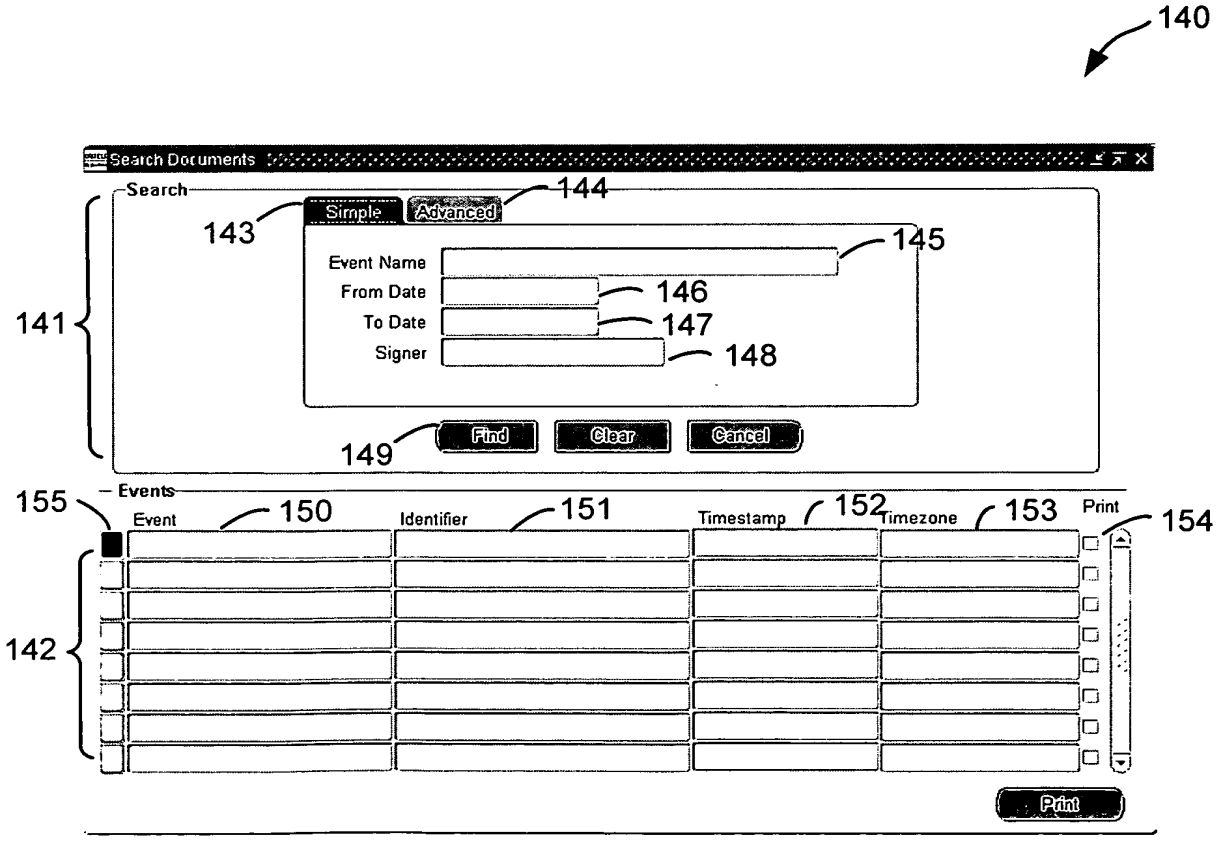

140
Search Documents
Search
143
Simple
Advanced
144
Event Name
145
From Date
146
To Date
147
Signer
148
141
149
Find
Clear
Cancel
Events
155
Event
150
Identifier
151
Timestamp
152
Timezone
153
Print
154
142
Print

*Fig. 13*

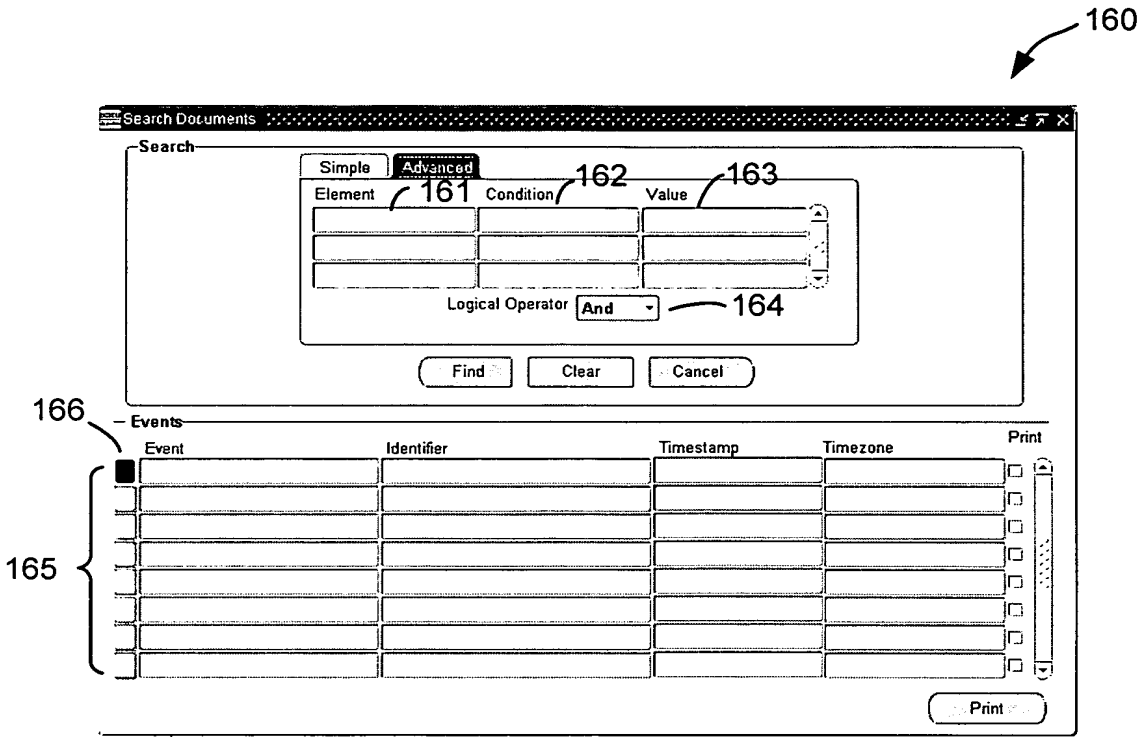
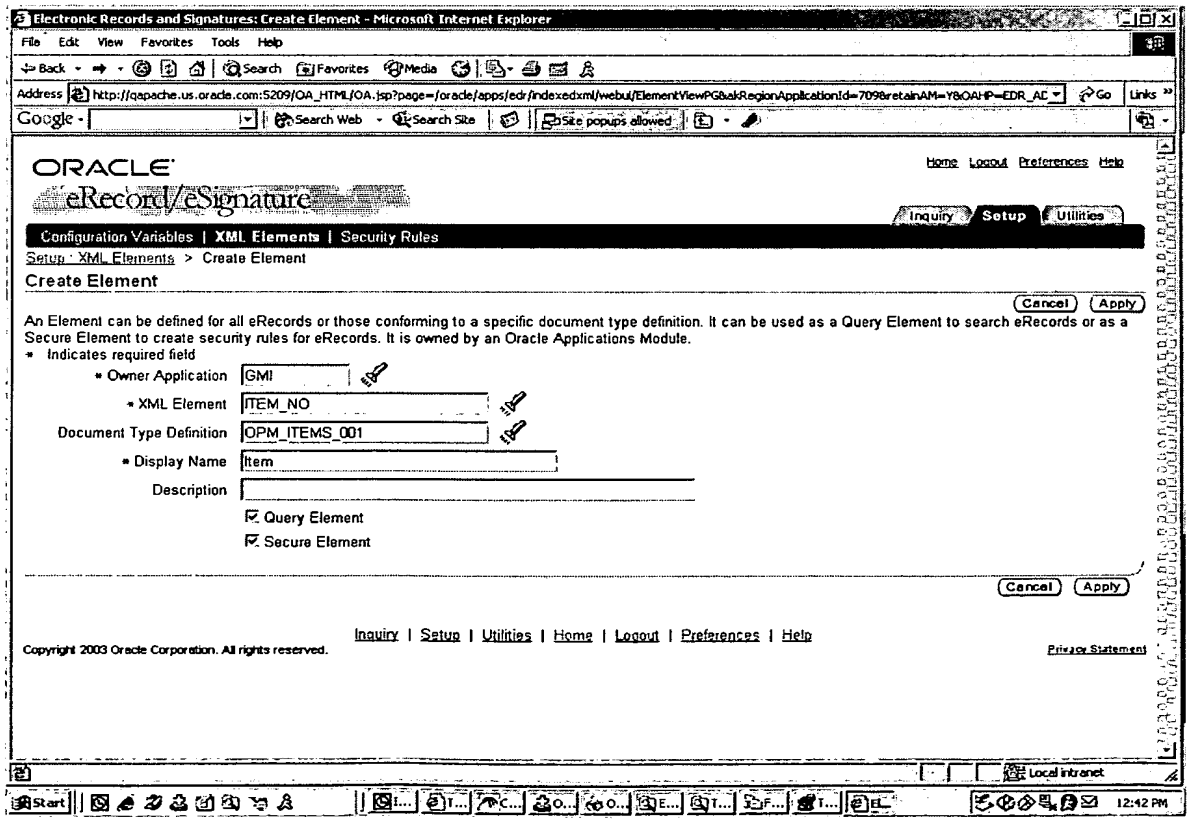

160
Search Documents
Search
Simple
Advanced
Element
161
Condition
162
Value
163
Logical Operator
And
164
Find
Clear
Cancel
166
Events
Event
Identifier
Timestamp
Timezone
Print
165
Print

*Fig. 14*


Electronic Records and Signatures: Create Element - Microsoft Internet Explorer
ORACLE
eRecord/eSignature
Home Logout Preferences Help
Inquiry Setup Utilities
Configuration Variables | XML Elements | Security Rules
Setup · XML Elements > Create Element
Create Element
Cancel Apply
An Element can be defined for all eRecords or those conforming to a specific document type definition. It can be used as a Query Element to search eRecords or as a Secure Element to create security rules for eRecords. It is owned by an Oracle Applications Module.
* Indicates required field
* Owner Application GMI
* XML Element ITEM_NO
Document Type Definition OPM_ITEMS_001
* Display Name Item
Description
Query Element
Secure Element
Cancel Apply
Inquiry | Setup | Utilities | Home | Logout | Preferences | Help
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Privacy Statement

*Fig. 15*

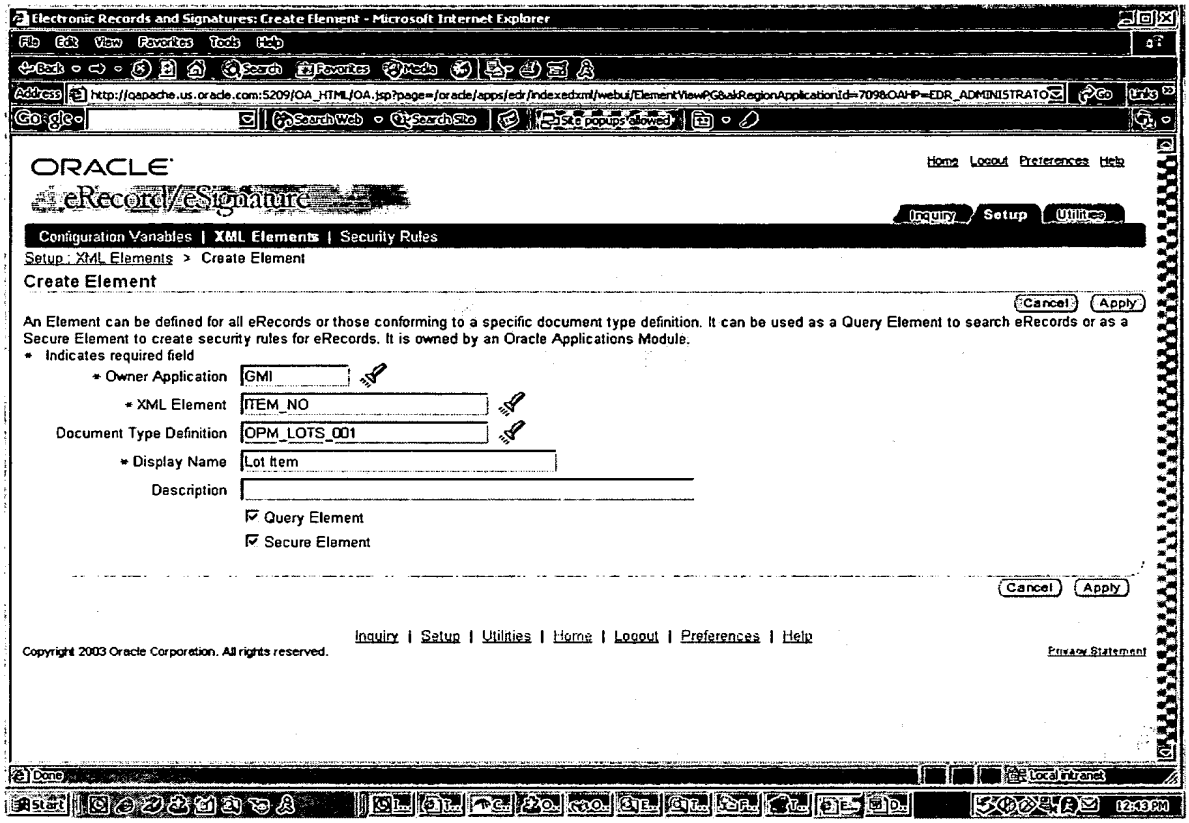
Electronic Records and Signatures: Create Element - Microsoft Internet Explorer
ORACLE
eRecord/eSignature
Home Logout Preferences Help
Inquiry Setup Utilities
Configuration Variables | XML Elements | Security Rules
Setup : XML Elements > Create Element
Create Element
Cancel Apply
An Element can be defined for all eRecords or those conforming to a specific document type definition. It can be used as a Query Element to search eRecords or as a Secure Element to create security rules for eRecords. It is owned by an Oracle Applications Module.
* Indicates required field
* Owner Application GMI
* XML Element ITEM_NO
Document Type Definition OPM_LOTS_001
* Display Name Lot Item
Description
Query Element
Secure Element
Cancel Apply
Inquiry | Setup | Utilities | Home | Logout | Preferences | Help
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Fig. 16

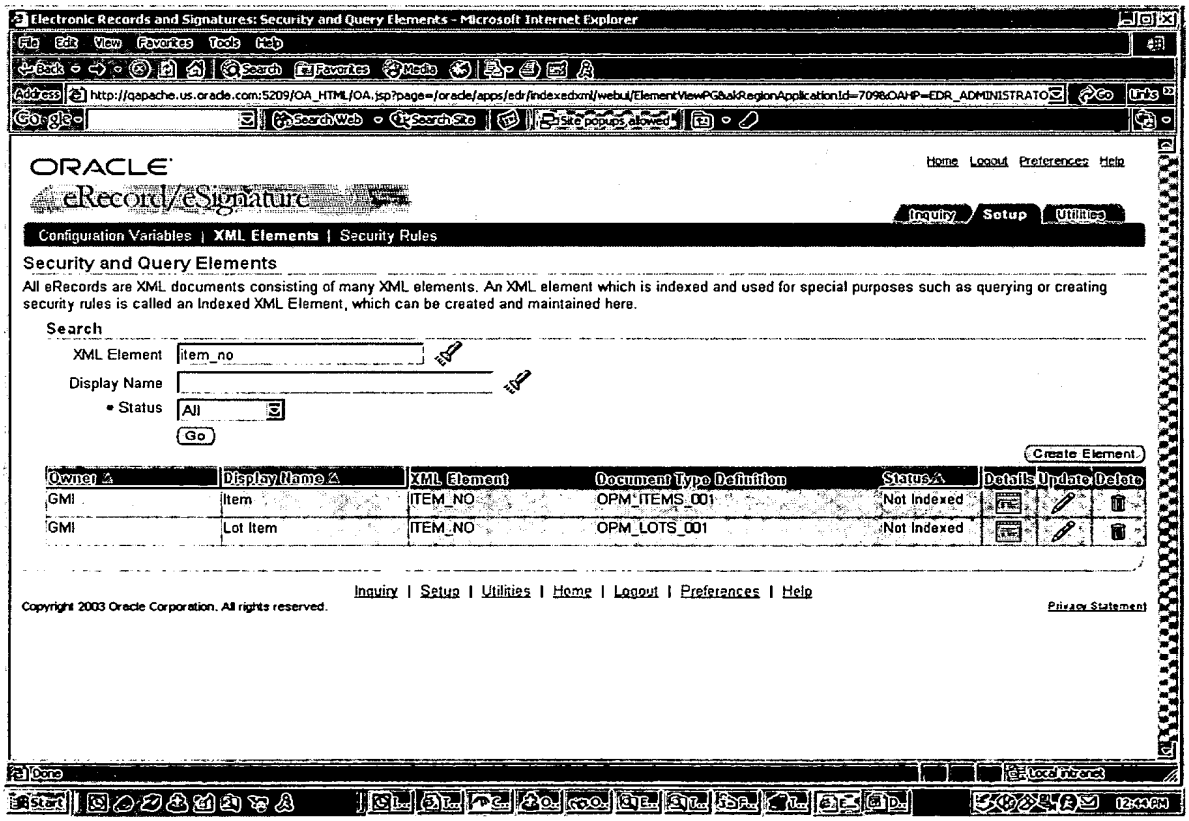
Electronic Records and Signatures: Security and Query Elements - Microsoft Internet Explorer
ORACLE
eRecord/eSignature
Home Logout Preferences Help
Inquiry Setup Utilities
Configuration Variables | XML Elements | Security Rules
Security and Query Elements
All eRecords are XML documents consisting of many XML elements. An XML element which is indexed and used for special purposes such as querying or creating security rules is called an Indexed XML Element, which can be created and maintained here.
Search
XML Element item_no
Display Name
* Status All
Go
Create Element
Owner | Display Name | XML Element | Document Type Definition | Status | Details | Update | Delete
GMI | Item | ITEM_NO | OPM_ITEMS_001 | Not Indexed
GMI | Lot Item | ITEM_NO | OPM_LOTS_001 | Not Indexed
Inquiry | Setup | Utilities | Home | Logout | Preferences | Help
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Fig. 17

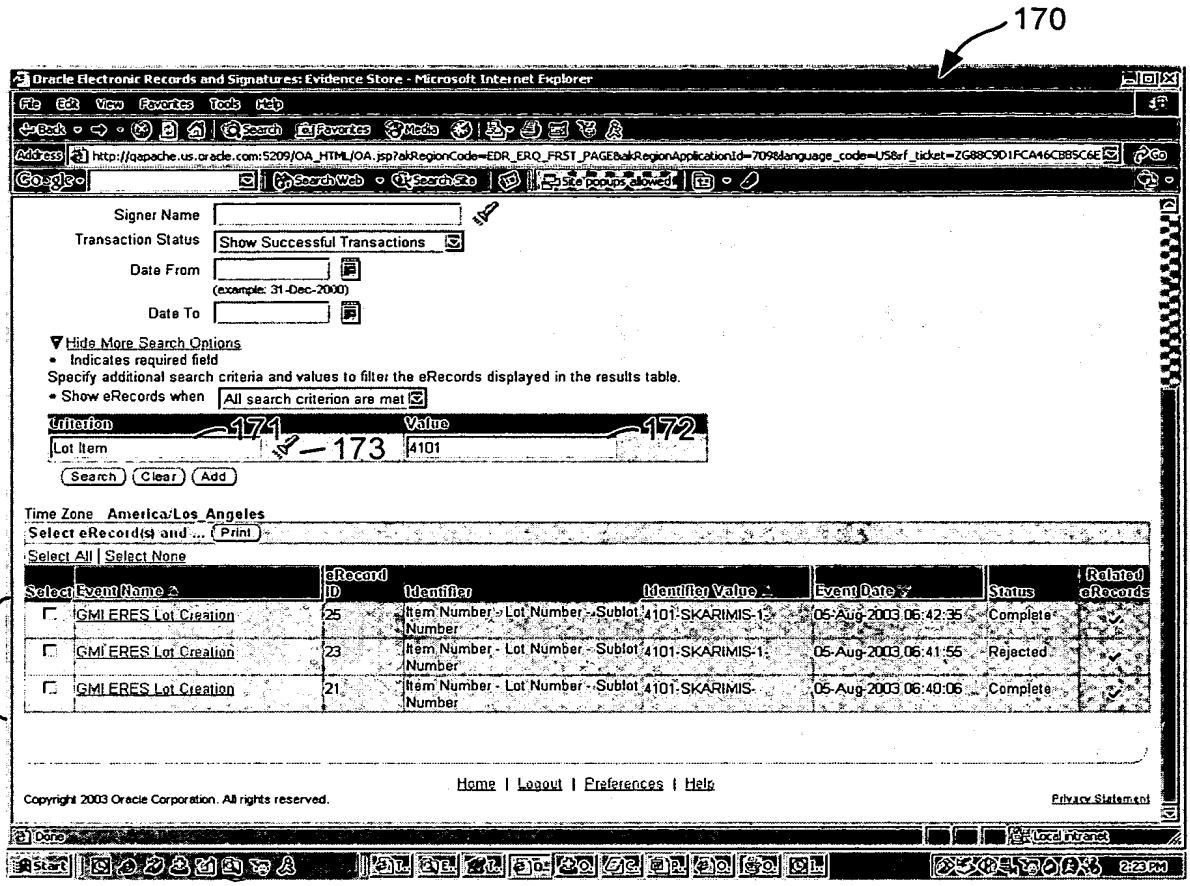
170
Oracle Electronic Records and Signatures: Evidence Store - Microsoft Internet Explorer
Signer Name
Transaction Status
Show Successful Transactions
Date From
(example: 31-Dec-2000)
Date To
Hide More Search Options
Indicates required field
Specify additional search criteria and values to filter the eRecords displayed in the results table.
Show eRecords when
All search criterion are met
Criterion
Value
171
172
173
Lot Item
4101
Search
Clear
Add
Time Zone America/Los_Angeles
Select eRecord(s) and ...
Print
Select All | Select None
Select
Event Name
eRecord ID
Identifier
Identifier Value
Event Date
Status
Related eRecords
GMI ERES Lot Creation
25
Item Number - Lot Number - Sublot Number
4101-SKARIMIS-1
05-Aug-2003 06:42:35
Complete
GMI ERES Lot Creation
23
Item Number - Lot Number - Sublot Number
4101-SKARIMIS-1
05-Aug-2003 06:41:55
Rejected
GMI ERES Lot Creation
21
Item Number - Lot Number - Sublot Number
4101-SKARIMIS-
05-Aug-2003 06:40:06
Complete
174
Home | Logout | Preferences | Help
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*Fig. 18*

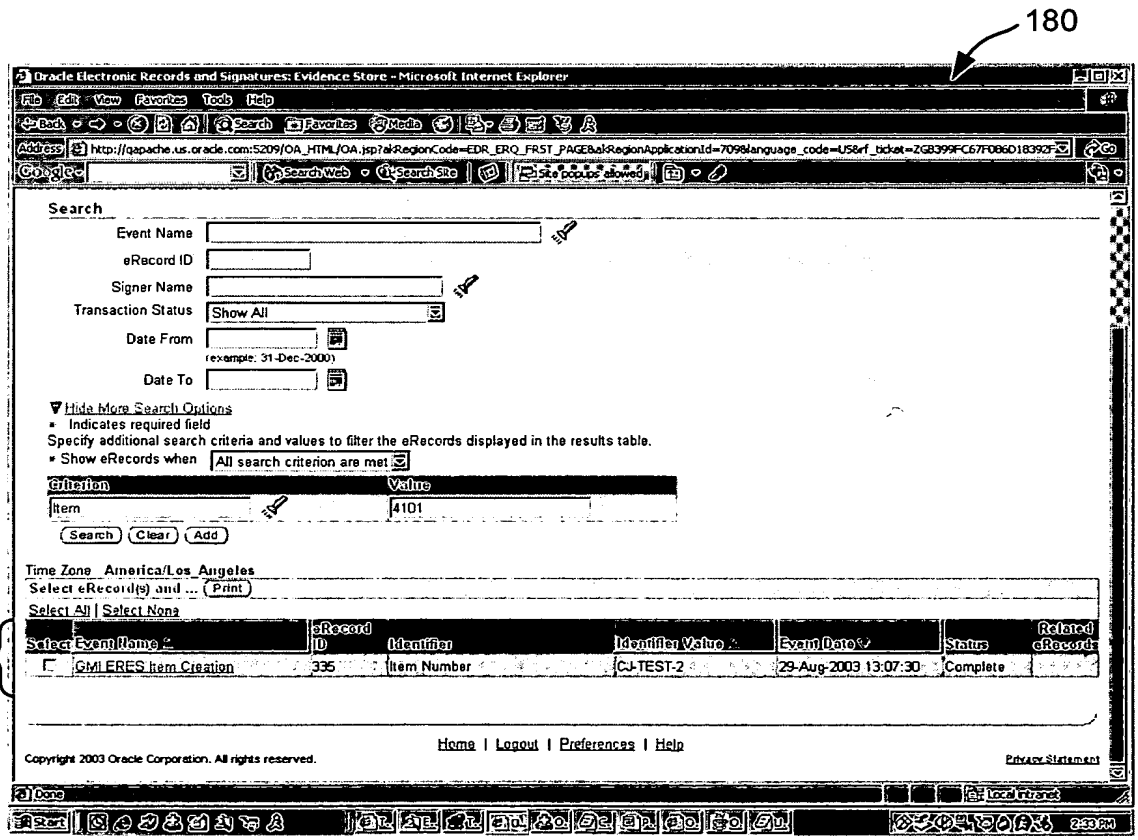
180
Oracle Electronic Records and Signatures: Evidence Store - Microsoft Internet Explorer
Search
Event Name
eRecord ID
Signer Name
Transaction Status
Show All
Date From
(example: 31-Dec-2000)
Date To
Hide More Search Options
Indicates required field
Specify additional search criteria and values to filter the eRecords displayed in the results table.
Show eRecords when
All search criterion are met
Criterion
Value
Item
4101
Search
Clear
Add
Time Zone America/Los_Angeles
Select eRecord(s) and ...
Print
Select All | Select None
Select
Event Name
eRecord ID
Identifier
Identifier Value
Event Date
Status
Related eRecords
GMI ERES Item Creation
335
Item Number
CJ-TEST-2
29-Aug-2003 13:07:30
Complete
184
Home | Logout | Preferences | Help
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*Fig. 19*

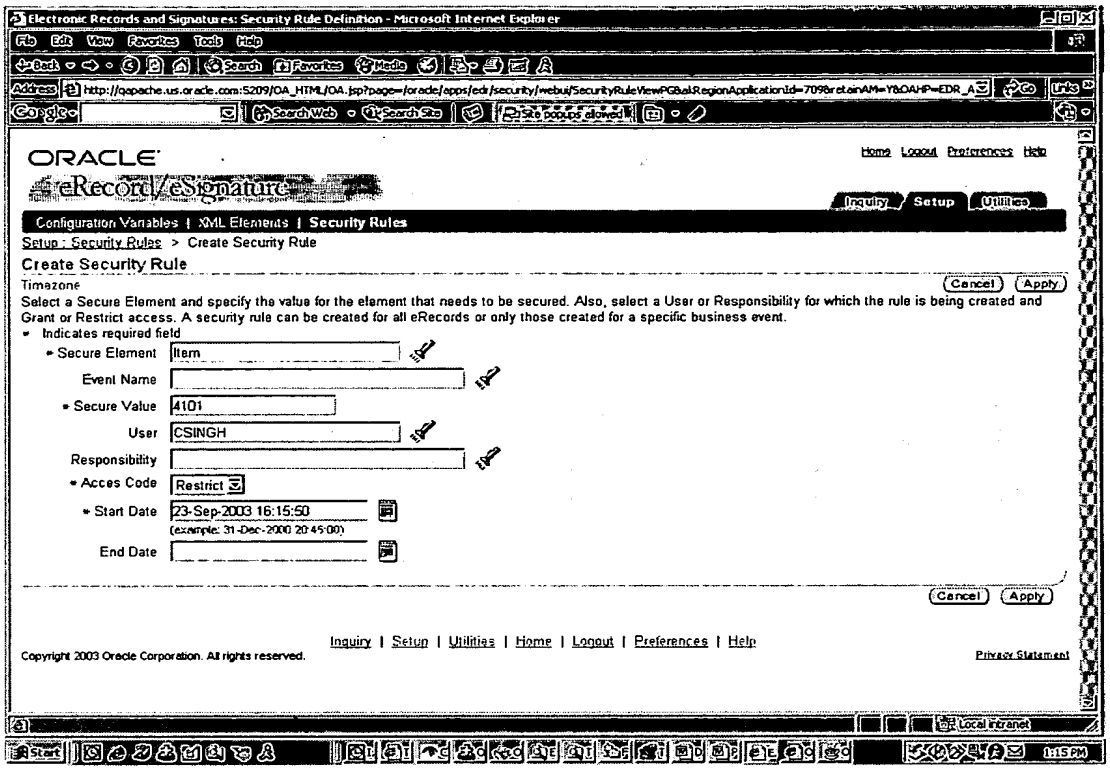
Electronic Records and Signatures: Security Rule Definition - Microsoft Internet Explorer
ORACLE
eRecord/eSignature
Home Logout Preferences Help
Inquiry Setup Utilities
Configuration Variables | XML Elements | Security Rules
Setup : Security Rules > Create Security Rule
Create Security Rule
Timezone
Cancel Apply
Select a Secure Element and specify the value for the element that needs to be secured. Also, select a User or Responsibility for which the rule is being created and Grant or Restrict access. A security rule can be created for all eRecords or only those created for a specific business event.
* Indicates required field
* Secure Element Item
Event Name
* Secure Value 4101
User CSINGH
Responsibility
* Acces Code Restrict
* Start Date 23-Sep-2003 16:15:50
(example: 31-Dec-2000 20:45:00)
End Date
Cancel Apply
Inquiry | Setup | Utilities | Home | Logout | Preferences | Help
Copyright 2003 Oracle Corporation. All rights reserved.
Privacy Statement
Local intranet
Start
1:15 PM

Fig. 20

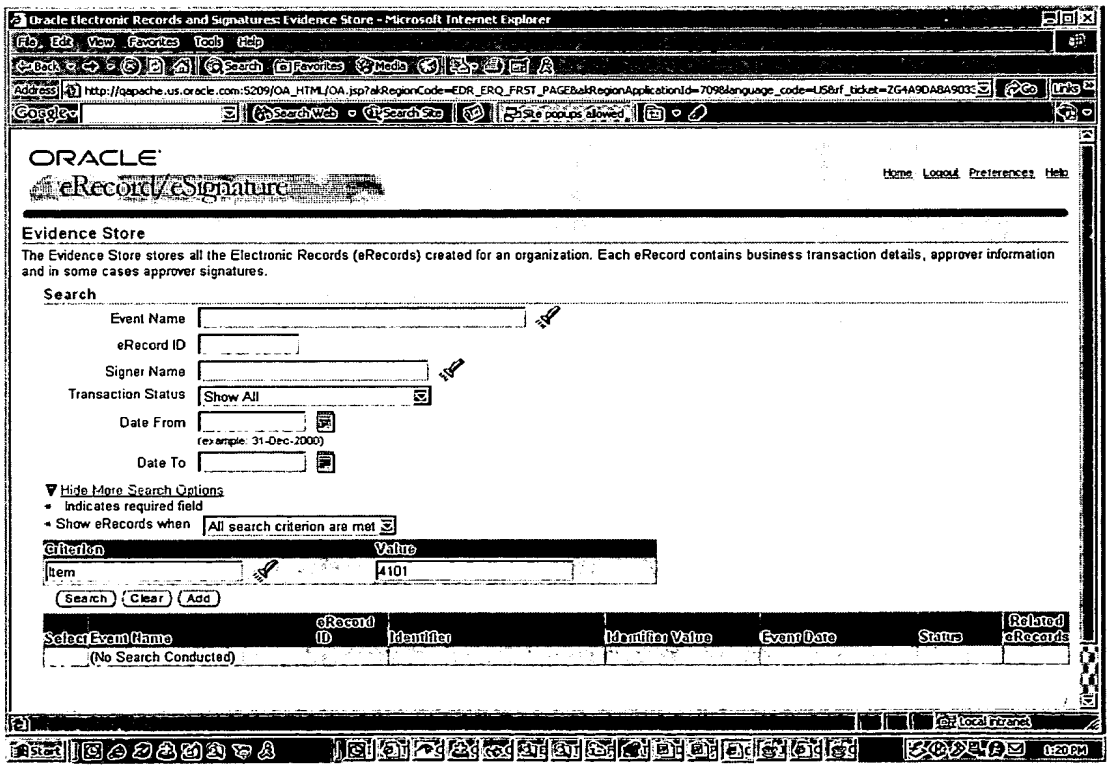
Oracle Electronic Records and Signatures: Evidence Store - Microsoft Internet Explorer
ORACLE
eRecord/eSignature
Home Logout Preferences Help
Evidence Store
The Evidence Store stores all the Electronic Records (eRecords) created for an organization. Each eRecord contains business transaction details, approver information and in some cases approver signatures.
Search
Event Name
eRecord ID
Signer Name
Transaction Status Show All
Date From
(example: 31-Dec-2000)
Date To
Hide More Search Options
* Indicates required field
* Show eRecords when All search criterion are met
Criterion Value
Item 4101
Search Clear Add
Select Event Name eRecord ID Identifier Identifier Value Event Date Status Related eRecords
(No Search Conducted)
Local intranet
Start
1:20 PM

Fig. 21